

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Presented) A communication device ~~(F)~~ for transmitting data to and receiving data from one or more other communication devices ~~(A, B, C, D, E)~~ via a network ~~(1)~~, wherein the communication device is arranged to respond to address information ~~(26)~~ broadcast by a second communication device ~~(G)~~ joining said network by determining whether a message ~~(27)~~ containing address information relating to said one or more other communication devices has previously been forwarded from the communication device to any other of said one or more other communication devices and, if not, sending said message to the second communication device.

2. (Currently Presented) A communication device ~~(G)~~

comprising:

means for transmitting data ~~(2, 3)~~ over a network ~~(1)~~; and
means for receiving data ~~(2, 3)~~ via the network;
configured to respond to a detection of activity ~~(23)~~ on the
network by:
broadcasting address information ~~(26)~~ of the communication
device to one or more other communication devices; and
receiving a message ~~(27)~~ sent from only one networked device
of said other communication devices, the message comprising address
information relating to said one or more other communication
devices and extracting said address information therefrom, wherein
said one networked device has not previously forwarded the message
to any other of said one or more other communication devices.

3. (Currently Presented) A The communication device ~~(G)~~
according to claim 2, configured to respond to the broadcast of
address information ~~(26)~~ from a further communication device ~~(H)~~ by
determining whether a message ~~(27)~~ containing address information
relating to said one or more communication devices ~~(A, B, C, D, E,~~
~~F)~~ has been sent by the communication device to another

communication device previously and, if not, sending said message to said further communication device.

4. (Currently Presented) A The communication device ~~(G)~~ according to claim 2, configured to broadcast address information ~~(26)~~ to said one or more other communication devices ~~(A-F)~~ if no network activity is detected.

5. (Currently Presented) A The communication device ~~(G)~~ according to claim 4, arranged so that, if no message ~~(27)~~ is received in response to the broadcast of address information ~~(26)~~, the address information is rebroadcast periodically.

6. (Currently Presented) A The communication device ~~(G)~~ according to claim 5, arranged to increase a period between successive broadcasts of the address information ~~(26)~~.

7. (Currently Presented) A The communication device ~~(F, G)~~ according to claim 1, operable in a first mode, in which a receiver ~~(3)~~ within said receiving means ~~(2, 3)~~ is inactive, and in a second

mode, in which the receiver is activated in order to receive data from said one or more other communication devices ~~(A, B, C, D, E)~~ and arranged to switch from the operating in the first mode to operating in the second mode in response to a detection of activity ~~(23)~~ on the network ~~(1)~~.

8. (Currently Presented) A The communication device ~~(F, G)~~ according to claim 7, configured to respond to said detection of activity ~~(23)~~ on the network ~~(1)~~ by determining if said activity comprises one of a wakeup signal addressed to the communication device or a broadcast wakeup signal and, if so, continuing to operate in said second mode to receive a further message ~~(24, 26)~~.

9. (Currently Presented) A communication device ~~(F, G)~~ according to claim 1, configured for use in a ubiquitous radio network ~~(1)~~.

10. (Currently Presented) A communication device ~~(F, G)~~ according to claim 1, configured for use in a ZigBee network.

11. (Currently Presented) A communication device ~~(F, G)~~ of claim 1, configured for use in a Bluetooth network.

12. (Currently Presented) A communication device ~~(G)~~ according to claim 1, further comprising a sensor ~~(6)~~ and means ~~(4)~~ for generating and transmitting data based on the output of the sensor via the network ~~(1)~~.

13. (Currently Presented) A communication device ~~(G)~~ according to claim 12, wherein said sensor ~~(6)~~ is arranged to monitor one or more environmental conditions.

14. (Currently Presented) A monitoring system comprising a plurality of communication devices ~~(G)~~ according to claim 12.

15. (Currently Presented) A communication system comprising a network ~~(1)~~ and a plurality of communication devices ~~(F, G)~~ according to claim 1.

16. (Currently Presented) A method of disseminating address

information from a communication device ~~(F)~~ connected to a network ~~(1)~~, comprising:

receiving broadcast address information ~~(26)~~ from a second communication device ~~(G)~~; and,

in response to said message, determining whether a message ~~(27)~~ containing address information relating to one or more other communication devices ~~(A, B, C, D, E)~~ connected to the network has previously been forwarded from the communication device to any other of said one or more other communication devices and, if not, sending said message to said second communication device.

17. (Currently Presented) A method for connecting a communication device ~~(G)~~ to a network ~~(1)~~, comprising:

detecting activity ~~(23)~~ on the network; and

in the event of an activity being detected, broadcasting address information ~~(26)~~ of said communication device to one or more other communication devices ~~(A, B, C, D, E, F)~~ connected to the network, receiving a message ~~(27)~~ from only one networked device of said communication devices comprising address information relating to said one or more communication devices and extracting

said address information therefrom, wherein said one networked device has not previously forwarded the message to any other of said one or more other communication devices.

18. (Currently Presented) A The method according to claim 17, comprising:

in response to broadcast of address information from a further communication device ~~(H)~~, determining whether a second message ~~(27)~~ containing information relating to said one or more communication devices ~~(A, B, C, D, E, F)~~ has been forwarded by the communication device ~~(G)~~ to any other communication device and, if not, sending the second message to said further communication device.

19. (Currently Presented) A The method according to claim 17, comprising, if no network activity ~~(23)~~ is detected, broadcasting the address information ~~(26)~~ to said one or more other communication devices ~~(A-F)~~.

20. (Currently Presented) A The method according to claim 19, comprising, if no message ~~(27)~~ is received following the broadcast

of address information ~~(26)~~, rebroadcasting the address information periodically.

21. (Currently Presented) A The method according to claim 20, comprising increasing a period between successive broadcasts of the address information ~~(26)~~.

22. (Currently Presented) A The method according to claim 16, comprising:

operating the communication device ~~(F, G)~~ in a first mode, in which a receiver ~~(2)~~ within the communication device is inactive; and

switching to operating the communication device in a second mode, in which the receiver is activated in order to receive data from said one or more other communication devices ~~(A, B, C, D, E)~~ in response to a detection of activity ~~(23)~~ on the network ~~(1)~~.

23. (Currently Presented) A The method according to claim 22, comprising, in response to detection of activity ~~(23)~~ on the network ~~(1)~~, determining whether said activity comprises one of a

wakeup signal addressed to the communication device ~~(F, G)~~ or a broadcast wakeup signal and, in response to a positive determination, continuing to operate in said second mode to receive a further message ~~(24, 26)~~.

24. (Currently Presented) A The method according to claim 16, further comprising receiving output from a sensor ~~(6)~~ and generating and transmitting via the network ~~(1)~~ data based on said output.